

## **Summary of the Ala Wai Public Workshop held on April 22, 2022 focusing on management measure development and screening across the Ala Wai Watershed.**

1. **Meeting Overview:** A workshop open to the public was held on April 22, 2022 from 12:00 pm to 1:15 pm to discuss screening of management measures across the Ala Wai watershed. Approximately 49 participants were in attendance; 19 were represented by the City & County of Honolulu (CCH) and the U.S. Army Corps of Engineers (USACE) and the remainder were from the general public. A full list of participants is included in Attachment 1.

A brief presentation was provided by USACE project management team leads Tyson Vaughan, Cindy Acpal, and Eric Merriam, that focused on the study progress, management measure tracking tool, screening of management measures, and next steps in the study process. A full list of management measures (223 total) was provided on the project website, [www.honolulu.gov/AlaWai](http://www.honolulu.gov/AlaWai) (resources tab). A copy of the presentation is provided in Attachment 2.

The participants were randomly assigned to two breakout rooms: Breakout Room #1 was facilitated by Tyson Vaughan and Kelley Philbin, and Breakout Room #2 was facilitated by Eric Merriam and Cindy Acpal. Both rooms discussed management measures across the whole watershed. The main room remained open for participants who may have dialed in and were unable to transfer to the breakout rooms. A list of questions was provided to facilitate discussions:

- a. Do you have any unanswered questions about specific measures, mentioned or not mentioned, assessed or not yet assessed?
- b. Are we still missing any additional measures?
- c. Any new information that we need to know?

Following the breakout session, participants returned to the main room where they continued open discussions. The following questions were provided to facilitate discussions in the main room:

- a. What else do we need to know or consider for our technical analysis and planning
- b. What questions do you have about the process, schedule, next steps, or how to stay engaged?

2. **Key Discussion Points:** The following key discussion points were identified during the breakout room and open discussions:

a. **City funding for maintenance:** A question was raised whether the State's \$1.6 billion surplus of money could be set aside to fund a City maintenance plan since the State funds the City. A: CCH clarified that City revenues for local government operations and services do not come from the state - the primary source of funding is property taxes:

<https://hnlldoc.ehawaii.gov/hnlldoc/document-download?id=13300#page=18>

b. **Request for City involvement in measures screened out:** A commenter requested for more City involvement in the management measure tracking spreadsheet, specifically, for the City to address measures that have been screened out when outside the scope of the Federal authority (i.e. a multifaceted solution that includes benefits to reduce pollution and increase water quality). A: This effort must focus solely on what the Federal government CAN do. Management measures not included in the Federal scope will be considered by CCH before,

during, and after this Federal effort. These ongoing island wide programs for drainage, flood, and erosion control are included in CCH's Capital Improvement Plan (DDC) and maintenance for City owned facilities (DFM) efforts.

c. **2<sup>nd</sup> outlet to the canal on the Kapahulu side:** Concerns were raised for the pollution generated along Waikiki beaches should a 2<sup>nd</sup> outlet to the canal be constructed. If the golf course could be used as a first flush to clean the water, then the 2<sup>nd</sup> outlet could be a viable option.

d. **Concern for environmental impacts:** Concerns were raised for the environmental impacts that tunnels, conduits, or a 2<sup>nd</sup> outlet to the canal would have to the nearshore marine environment, critical fish habitat, and the coral reef which is our first line of defense against coastal storm surge.

e. **Ecosystem restoration:** Continued questions whether ecosystem restoration could be included as part of the Federal project. A: This study was funded under the Bipartisan Budget Act of 2018 specifically for the assessment and implementation of riverine flood risk management. Therefore, the study will not consider features that only provide ecosystem restoration benefits. Within the flood risk management authority, the team will explore opportunities to reduce flood risk through natural or nature-based solutions that restore or mimic natural processes. See FAQ #20 on the project website.

f. **Tiering system:** Questions were asked regarding the tiering system and why some measures that should be considered priority are listed lower in the tier system. A: The tiering system is intended to allow the technical team to analyze the various measures more effectively. It does not mean that any one measure is preferred over any other measure. For example, for a second opening to the canal, the Paki Ave. route is Tier 2 because it leverages existing infrastructure, versus the micro-tunnels under Waikiki which would be a Tier 3 because even though it may have a similar effect to the Paki outlet, it would require additional information (such as borings) and new infrastructure. The tiering system allows us to more efficiently analyze how to prioritize.

g. **System approach:** A commenter suggested looking at solutions around the Ala Wai Canal area first, then move towards solutions further up in the watershed. A: The team is looking in the upper watershed first for a couple of reasons: If you can capture water further upstream, then there's less water that you'll have to manage downstream. Also, it would help reduce flood risk further up in the watershed.

h. **Floodwalls around the canal:** A commenter noted that floodwalls or any type of above ground storage around the canal would cause problems to nearby interior drainage systems. Every drainage outlet would need to be capped or include a pumping station. Flood gates would be required at Husten Ditch, the University Avenue 8x10' culvert, and Makiki Stream. Flood walls would also have concerns for micro pilings, coral subbase liquification, historic walls, and location of trees.

i. **Real estate acquisition:** A question was asked whether easements or right-of-way acquisitions would be based off of conceptual design. A: As part of the Feasibility study, a Real Estate Plan will be developed, which will outline the real estate needs and requirements of the recommended plan. So, during this phase only a real estate plan will be developed, no acquisitions yet.

j. **Feasibility location of detention basins:** A question was asked whether the original detention basins proposed in the 2017 Feasibility study are under consideration again. A: Not at this time. The previous study updated modeling and showed that those detention basins were

not as effective as initially thought to be. There are also environmental impacts with those detention basins, as well as concerns for acceptability.

**3. Additional Management Measures:** The following measures were submitted by meeting participants.

- a. Reduce debris and erosion coming from the forest (invasive plants, trees, and feral pigs). Addressing the debris will help reduce the need for dredging and protect the coral reef.
  - Debris management is already listed in the tracker spreadsheet under #12, invasive trees listed under #91, invasive plants under #92, management of feral pigs under #93.
- b. Integral submerged pump gates at golf course and harbor.
  - Submersible pump & gate at the harbor is already identified in the tracker under #13, 28 & 30; pump at the golf course identified under #35.
- c. Renew walls in canal to allow canal storage prior to storm and integrate wall sluice gates to relieve king tide groundwater inundation.
  - New canal walls with storage in the canal has already been identified under #5 in the tracker spreadsheet; sluice gates have been identified under #26.
- d. Enable a clean and safe canal by pumping 30 cfs ocean water from Kapahulu pier to canal.
  - A 30 cfs pump to bring in fresh seawater, tied into a buried pipe system on the east end of the canal has already been identified in the management measure tracking spreadsheet under #23.
- e. Rebuild/reinforce the canal walls and dredge the canal to its original depth.
  - New canal walls combined with deepening the canal for additional storage has already been identified under #5 in the tracker spreadsheet.
  - Dredging may cause structural issues and slope stability issues with the bridges and piers within the canal. The canal will have tidal influence, reducing capacity as well.
- f. Palolo Stream erosion near Pukele triangle park
  - This measure was already identified in the tracker spreadsheet under #84; however it was screened out as addressing stream bank erosion is generally outside of the USACE authority for flood risk management studies. A non-Federal entity may request to initiate a separate study under other USACE authorities (i.e., Section 14 of the Continuing Authorities Program), for which stream bank erosion can be addressed.
- g. 3' Berms around Iolani, Hokulani Elem, Ala Wai Elem, and Noelani Elem.
  - This measure has already been identified in the tracker spreadsheet under #60 and #210.
  - Another commenter noted that berms around the schools could create interior flooding due to limited drainage capacity.
- h. Flood gate at the mouth of the canal to protect from tide surge and high tides
  - A surge barrier at the mouth of the canal was already identified in the tracker under #196
- i. Pump at the mouth of the canal
  - A pump and gate at the mouth of the canal is already listed in the tracker spreadsheet under #30.
- j. Divert water from Kanewai Field to the Ala Wai golf course.

- Diverting the water from Kanewai Field to the golf course has already been identified in the tracker under #58.
- k. Microtunnel or conduit through Waikiki.
  - Microtunnels through Waikiki have already been identified under #20 and 24; utilizing existing conduit to evacuate water through Waikiki was identified under #214.
- l. 2<sup>nd</sup> opening to the canal on east end.
  - An additional opening to the canal has already been identified in the tracker spreadsheet under #21 and 22.
- m. Utilize the golf course for detention.
  - The golf course has already been identified in the tracker spreadsheet for detention under #39 and 40.

A consolidated list of management measures can be found at <https://www.honolulu.gov/alawai/resources.html>.

4. The public is encouraged to stay engaged:

- a. Email the project team: [AlaWai@honolulu.gov](mailto:AlaWai@honolulu.gov)
- b. Post ideas on Crowdsourc Reporter (until 30 April), <https://lrp.maps.arcgis.com/apps/CrowdsourcReporter/index.html?appid=df9e77cff6454945ad3dc75716a044ec>
- c. Check the project website: [www.honolulu.gov/AlaWai](http://www.honolulu.gov/AlaWai)
  - Sign up for additional meeting notifications
  - View or download the management measure tracker
  - Updated FAQs
  - Comment Form
  - Previous meeting recordings and presentation slides
  - Details for upcoming meetings in July (coming soon)

## Attachment 1 – Workshop #4 Participants List

1. 8082\*\*\*\*10
2. 8088\*\*\*\*75
3. aaa
4. Alex Kozlov DDC
5. Allen Chin
6. Anthony aalto
7. Benjamin Reder
8. Beverly Espiritu
9. Brandon Sekiya
10. Cindy Acpal
11. Daisy Murai
12. Dave Watase
13. Dawn Szewczyk, PE
14. Dean
15. Dean Hirabayashi
16. Eric Merriam
17. George Uku
18. Grant Tokumi
19. Haku Milles
20. healani
21. Ibrahim Aoude
22. Kelley Philbin
23. ken
24. Laura Ruby
25. Lorraine Minatoishi
26. Luciano Minerbi
27. Matthew Gonser
28. Melvia Kawashima
29. Michelle Matson
30. Mike Elhoff
31. Mr cory
32. Rhiannon Kucharski
33. Richard Yoneda
34. Roger Babcock
35. Scott Humber
36. Sharon C.
37. Sidney Lynch
38. Stephanie Ratte
39. Steve Holmes
40. Steve Wilson
41. Sue Hornik
42. Susan Henshaw
43. Terry Chan
44. Tyler Sugihara
45. Tyson Vaughan
46. Warren
47. Wbillingsley

48. Winston Welch

49. Yanling Li

 = U.S. Army Corps of Engineers  
 = City & County of Honolulu


## Attachment 2 – Workshop #4 (Entire Watershed) Presentation Slides


# ALA WAI FLOOD RISK MANAGEMENT GENERAL RE-EVALUATION STUDY

## SUB-BASIN WORKSHOP 4: WHOLE WATERSHED

US Army Corps of Engineers (USACE)  
City and County of Honolulu (CCH)

22 April 2022  
*\*This session is being recorded.*







### SCHEDULE: SUB-BASIN WORKSHOPS



1. April 1, 2022 (F): Makiki and Pālolo Sub-basins
2. April 8, 2022 (F): Mānoa Sub-basin
3. April 14, 2022 (Th): Ala Wai Canal and Lower Watershed
4. April 22, 2022 (F): Continued discussions (whole watershed)

- Over 100 participants in first three April workshops
- Over 120 participants in Nov and Jan meetings
- 223 total management measures (~200 suggested by public)
- 168 Crowdsourcing Reporter comments
- Dozens of emails to [AlaWai@honolulu.gov](mailto:AlaWai@honolulu.gov)



### PUBLIC RECORDS @ HONOLULU.GOV/ALAWAI



[Home](#)

[Why this is important](#)

[Public Engagement](#)

[Resources](#)

[FAQ](#)

[Contact](#)

US Army Corps of Engineers,  
Honolulu District Public Affairs  
Bldg. 230, Room 302  
Fort Shafter, HI 96858-5440  
Phone: (808) 835-4004

#### ANNOUNCEMENTS

- REMINDER FOR FRIDAY: Final Ala Wai - focused April Workshop
- UPDATED [Management Measure Tracking Spreadsheet](#) (April 20, 2022)
- SUBSCRIBE FOR UPDATES: Stay informed when updates are made to this website!
- View the [PRESS RELEASE](#) for information on the [Virtual Public Engagement Workshops in April 2022](#):

<a href="#">April 1, 2022 (Friday)</a> <a href="#">12 - 1:10 pm HST</a>	Makiki and Pālolo Sub-Watershed <ul style="list-style-type: none"><li>• <a href="#">(posted meeting minutes)</a></li><li>• <a href="#">(workshop recording)</a></li></ul>
<a href="#">April 8, 2022 (Friday)</a> <a href="#">12 - 1:10 pm HST</a>	Mānoa Sub-Watershed <ul style="list-style-type: none"><li>• <a href="#">(posted meeting minutes)</a></li><li>• <a href="#">(workshop recording)</a></li></ul>
<a href="#">April 14, 2022 (Thursday)</a> <a href="#">12 - 1:10 pm HST</a>	Ala Wai Canal and Lower Watershed <ul style="list-style-type: none"><li>• <a href="#">(posted meeting minutes)</a></li><li>• <a href="#">(workshop recording)</a></li></ul>
April 22, 2022 (Friday) 12 - 1:10 pm HST	Continued Discussions / Q&A



## HIGHLIGHTS: LOWER WATERSHED WORKSHOP



1. Continued constructive interest and engagement
2. Appreciation for value of measure tracker and these workshops
3. Concern with associated risks: sea level rise, contamination, erosion, etc.
4. Continued concern about effects of new developments in watershed (e.g., Ala Pono pedestrian bridge)
5. Is Ala Moana included? (Yes, it is.)
6. Discussion of risk communication terminology ("100-year" vs. 1% annual chance event, etc.)
7. Additional measures suggested and discussed
8. Seeking clarification of screening & analysis process (e.g., tiering)
9. Desire to see conceptual drawings, visualizations of measures



## TODAY'S AGENDA: CONTINUED DISCUSSION



1. Introduction (5 min) ← You are here!
2. Presentation (15 min)
3. Breakout discussion setup (3 min)
4. Focused breakout discussions: management measures (~20 min)
5. Large-group discussion / Q & A (~20 min)
6. Wrap-up (7 min)



## HOSTS & DISCUSSANTS



### *Presenters (USACE):*

- **Eric Merriam**, PhD, PMP; Planner; *Study Lead*
- **Cindy Acpal**, Project Manager

### *MC / Lead Facilitator (USACE):*

- **Tyson Vaughan**, PhD; Sociologist

### *Additional Facilitators (USACE):*

- **Kelley Philbin**, PE; Engineer; *Technical Lead*
- **Susan Henshaw**, Planner
- **Ben Reder**, Project Manager

### *Discussants (CCH):*

- **Alex Kozlov**, PE; Director, Department of Design and Construction, City & County of Honolulu
- **Haku Milles**, PE, LEED AP; Deputy Director, Department of Design and Construction, City & County of Honolulu
- **Matthew Gonser**, AICP, CFM; Chief Resilience Officer, Office of Climate Change, Sustainability and Resiliency, City & County of Honolulu





## GROUND RULES: PRESENTATION



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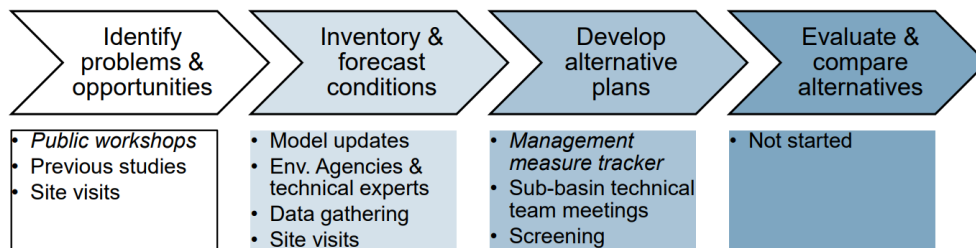
1. Post comments and questions in the chat or hold until breakouts.
2. Keep your audio on mute during the presentation.
3. If you are having technical difficulties, let us know via the chat and/or email to Tyson Vaughan: [Earl.T.Vaughan@usace.army.mil](mailto:Earl.T.Vaughan@usace.army.mil).



## STUDY PROCESS & PROGRESS



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### Progress Since Last Public Information Meeting:

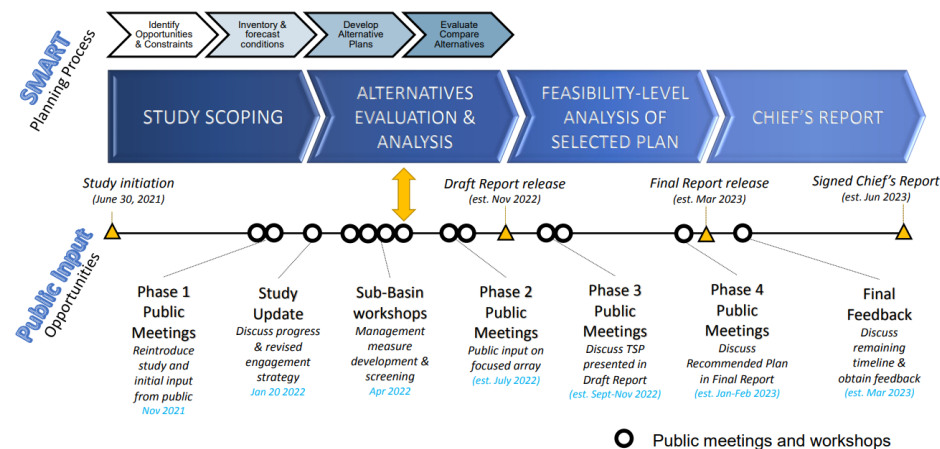
- Hydrologic & hydraulic model updates and calibration
- Completed sub-basin management measure development meetings
- Initial round of management measure screening (ongoing)
- Technical team site visit from March 21-24



## STUDY PROCESS & PROGRESS



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NOTE: Only displaying measures 1-16 of 223 total



Measures

Objectives

Effectiveness

Build plans from these

Screening process



1. Reduce risks to life and safety associated with direct inundation of structures and transportation infrastructure.
2. Reduce economic damages associated with direct inundation of structures and public infrastructure.
3. Reduce economic impacts associated with disruption of commerce and tourism.



## NEXT STEPS: ENGAGEMENT



### July 2022 Workshops

- Goal: Discuss and get feedback on focused array of alternatives.
- A series of in-person and/or virtual meetings
- Objectives:
  1. Discuss study progress, revisit schedule, outline next steps.
  2. Discuss results of measure/alternative screening and those still under consideration.
  3. Community feedback on alternatives and measures.
  4. Identification of secondary impacts.

### Continuous Engagement Opportunities

- Management measure tracker spreadsheet updates.
- Website update notifications – email sign up on website.
- Website comment form.



## DISCUSSION GROUPS (20 MINUTES)



15

**Webex main room.** (here)

Facilitator: Ben Reder

### Discussion group 1.

Facilitators: Tyson Vaughan and Kelley Philbin (technical lead)

### Discussion group 2.

Facilitators: Eric Merriam (study lead) and Cindy Acpal (project manager)

(Random assignment.)



## DISCUSSION GROUPS: QUESTIONS



16

1. Do you have any unanswered questions about specific measures, mentioned or not mentioned, assessed or not yet assessed?
2. Are we still missing any additional measures?
3. Any new information that we need to know?



## GROUND RULES: DISCUSSION GROUPS



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1. Post comments and questions in the chat or use the “raise hand” tool.
2. Keep your audio on mute unless speaking.
3. Introduce yourself briefly the first time you speak.
4. When speaking, be conscious of acronyms and technical language.
5. Be mindful and help ensure that others have a chance to speak.



## LARGE-GROUP DISCUSSION / Q & A



18

1. What else do we need to know or consider for our technical analysis and planning?
2. What questions do you have about process, schedule, next steps, or how to stay engaged?



## NEXT STEPS: ENGAGEMENT



### July 2022 Workshops

- Goal: Discuss and get feedback on focused array of alternatives.
- A series of in-person and/or virtual meetings
- Objectives:
  1. Discuss study progress, revisit schedule, outline next steps.
  2. Discuss results of measure/alternative screening and those still under consideration.
  3. Community feedback on alternatives and measures.
  4. Identification of secondary impacts.

### Continuous Engagement Opportunities

- Management measure tracker spreadsheet updates.
- Website update notifications – email sign up on website.
- Website comment form.



## MAHALO

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Thank you for your participation! Please stay engaged:

- Email the project team: [AlaWai@Honolulu.gov](mailto:AlaWai@Honolulu.gov).
- Last chance to post on Crowdsource Reporter! **(until April 30)**  
<https://lrp.maps.arcgis.com/apps/CrowdsourceReporter/index.html?appid=df9e77c7ff6454945ad3dc75716a044ec>
- Check the project website: <https://www.honolulu.gov/AlaWai>.
  - Sign up for additional meeting notifications
  - Comment form
  - Continuously updated FAQs
  - **Updated management measure and alternative plan tracker**

### Attachment 3 – Workshop #4 Chat Comments (Main Room)

- 11:55 AM from Grant Tokumi to everyone: Hello. THanks.
- 12:00 PM from Kelley Philbin to everyone: Kelley Philbin, Technical Lead, USACE
- 12:02 PM from Eric Merriam to everyone: Eric Merriam, Study Lead, USACE
- 12:03 PM from Benjamin Reder to everyone: Benjamin Reder, Facilitator, USACE
- 12:04 PM from Winston Welch to everyone: Winston Welch, The Outdoor Circle
- 12:06 PM from Laura Ruby to everyone: please do not use the word pono in connection with the bridge proposal. The bridge is not pono.
- 12:08 PM from Matthew Gonser to everyone: Aloha and Happy Earth Day! Matt Gonser, City Office of Climate Change, Sustainability and Resiliency.
- 12:09 PM from Eric Merriam to everyone: Thank you for your comment Laura. We will do our best to refer to this project as the Ala Wai Bridge Project moving forward. We are also happy to use other suggested names, as well.
- 12:09 PM from Tyson Vaughan to everyone: Tyson Vaughan, USACE Collaboration & Public Participation Center of Expertise. Earl.T.Vaughan@usace.army.mil
- 12:11 PM from Sidney Lynch to everyone: Saw there is a 1.6 billion surplus in the budget. Can't some of this be put aside for a maintenance sustainability fund? Maintenance is the key but USACE has no 'teeth' to enforce after things are built. Up to city to do or not do. Should have a funded plan first.
- 12:12 PM from Sidney Lynch to everyone: How about the Sydney Opera House wanna be for the name of the bridge?
- 12:17 PM from Luciano Minerbi to everyone: An integrated watershed measure that includes flood, reduction, ecosystem restoration, pollution abatement had engineering design solutions that are different from a single flood reduction measure that it is why a measure cannot be eliminated just because it is not in the study authority of USACE. The spreadsheet of measures is really great but it should be extended and populated by the state and the city written input. The collaboration among the 3 level of government including private and community sectors has to be made explicit so for each measure it is clear the lead agency and the supporting entities that participate in its effectuation. mahalo
- 12:19 PM from Alex Kozlov DDC to everyone: Agree with Ms. Lynch that maintenance is vital. Not sure about a \$1.6B surplus. Not aware of any City budget surplus. Budget is balanced.
- 12:20 PM from aaa to everyone: I may have missed this, but for what year flood are your objectives? One year flood event? Two year? Ten year? Twenty-five year? 100 year?
- 12:20 PM from Haku Milles to everyone: Hi aaa,
- 12:21 PM from Haku Milles to everyone: Please refer to FAQ #1 on the website
- 12:21 PM from Haku Milles to everyone: <https://www.honolulu.gov/alawai/faq.html>
- 12:21 PM from Sidney Lynch to everyone: The state has the money according to a recent article in the StarAdvertiser. The city gets it's money from the state. Maybe ask for funds for maintenance.
- 12:21 PM from aaa to everyone: Are you rejecting alternatives that do not sufficiently deal with a 100 year flood even though other measures do not sufficiently address them?

- 12:22 PM from Dave Watase to everyone: Comment: Lower Watershed Measures: Structural on last weeks Powerpoint page: No. 53 Kaimuki Detention Basin (Why too small and in close proximity the Ala Wai Golf Course which dwarfs all other upstream detention basins) . Just use the whole golf course rather than just a small section. 39-48 The Ala Wai Golf Course Detention basin is the place to store flood water because of its size and location which is right behind the bottleneck (the flat Ala Wai Canal which has no slope and the velocity is determined by the flood water elevating within the canal creating its own slope to exit the canal.) Problem is when we have a high tide or tide surge when the ocean is higher than the canal then no flood water can exit. No. 60, Berm wall around Iolani is a good idea to elevate to the same height as the Waikiki side. I don't favor above ground walls that require capping and will cause internal drainage flooding.
- 12:29 PM from melvia kawashima to everyone: aloha! sorry - Melvia from CM Say's office!
- 12:29 PM from melvia kawashima to everyone: Councilman Say
- 12:58 PM from luciano minerbi to everyone: Dave Watase input here has a lot of merit.
- 12:59 PM from Matthew Gonser to everyone: From Sidney's earlier questions - City revenues for local government operations and services do not come from the state - the primary source of funding is property taxes:  
<https://hnlldoc.ehawaii.gov/hnlldoc/document-download?id=13300#page=18>
- 12:59 PM from Tyler Sugihara to everyone: Melvia, is this near Keanu St in Palolo?
- 12:59 PM from Mike Elhoff to everyone: 1. Reduce debris and erosion coming from forest (invasive plants, trees, and feral pigs)
- 1:00 PM from Mike Elhoff to everyone: 2. Integral submerged pump gates at golf course and harbor
- 1:00 PM from Sidney Lynch to everyone: Thanks for the clarification on source of city funding.
- 1:00 PM from Kelley Philbin to everyone: Mike: we will look at the impacts of #1.
- 1:00 PM from Kelley Philbin to everyone: \* with sensitivity runs and hydrologic modeling
- 1:00 PM from melvia kawashima to everyone: no - it's by the Pukele triangle Park area--where city storm water easement now fenced off area was--didn't you visit with us last yera?
- 1:01 PM from Dave Watase to everyone: I hope the alternatives for the new study are for the most part distinctly different from what was being proposed in 2015 DEIS, 2017 EIS, and 2019 EDR? Because there are 14 resolutions from seven NB that opposed almost all parts of the plan. Only Waikiki supported it but they refused to hear a counter presentation and were desperate for anything even if they knew nothing about it or whether it would work. They pegged all the other 7 NB's as self-fish and NIMBY's not willing to protect Waikiki our economic engine. Everyone understands the economic importance of Waikiki. No one is against flood mitigation the concern is how it is achieved.
- 1:01 PM from Mike Elhoff to everyone: 3. Renew walls in canal to allow canal storage prior to storm and integrate wall sluice gates to relieve king tide groundwater inundation
- 1:01 PM from luciano minerbi to everyone: R Margoluis & N Salafsky Measure of Success book has the flow charts and the measures spreadsheet that include leading

agencies and prtnr entities needed to get NRM watershed planning. This is what Luciano is trying to suggest encouraging written participation by fed & city into the spreadhseet now. Mahalo

- 1:02 PM from Lorraine Minatoishi to everyone: does the project also include as one of the goals to clean the waters of the ala Wai Canal and the streams for the betterment of the eco-system? to bring back clean water to allow for fishing?
- 1:02 PM from melvia kawashima to everyone: Dawn and Alex Kozlov went...
- 1:04 PM from Cindy Acpal to everyone: Meeting minutes, slides, and recordings can be found here: <https://www.honolulu.gov/alawai/public-engagement.html>
- 1:05 PM from Kelley Philbin to everyone: Lorraine: The goal of the study is to reduce flood risk. We do include environemtnal impacts and benefits as part of our final recomendation though.
- 1:05 PM from melvia kawashima to everyone: yes; that is the area where trees was done--about 5 houses further downstream, stream soil erosion 5-10 feet from properties; Chaminade side has expanded.
- 1:05 PM from Cindy Acpal to everyone: @Lorraine, please see FAQ #20 regarding ecoysystem restoration: <https://www.honolulu.gov/alawai/faq.html>
- 1:07 PM from Sidney Lynch to everyone: So will USACE give the HEC RAS software to others besides Stantec?
- 1:10 PM from Eric Merriam to everyone: We are still finalizing our models and have not shared them with anyone at this point. The software itself is publicly available.
- 1:11 PM from Dave Watase to everyone: The Ala Wai Watershed is only 7 miles long. I believe conveyance is the way to go. The main problem is the low lying flat lands below H-1 to Waikiki. The Ala Wai Canal is the bottleneck. Has been referred by the USACE as a reservior, like a bath tub and that the canal elevation is the bottom of the trough, meaning the depth of the canal does little to improve the flows. The Ala Wai Canal hydrograph at the Ala Moana Blvd Bridge needs to convey over 350 million cubic feet over a 24 hour period of time for the updated modeling and only included the channel flows and not the flood waters outside the channels. This is enormous and even the peak flows for the main streams ranged from 4-6 hours long. This in my mind made detention basins the wrong approach. What would a 500,000 cf detention basin at Kanewai do ... nothing. What would a 600,000 cf detention basin at Woodlawn do ... nothing. What would a 17,000,000 detention basin above Manoa do ... nothing.
- 1:12 PM from ken to everyone: Did I see somewhere that the Genki Ala Wai Project efforts has been "rejected"because the effect would be minimal to the flood mitigation effort. That may be true but in effect, the effect of that project in terms of "clean water" is significant and the community including the hotel industry are jumping on board to support this project. So, far the pilot project of the Genki project has focused on the canal but will eventually be implemented from the upper watershed and into the coral reef ecosystem. Btw, the USACE plan whatever it might turn out to be must include the nearshore marine ecosystem since we are also concerned by sea level rise, etc. some of which could be mitigated by maintaining a healthy coral reef ecosystem.
- 1:14 PM from Winston Welch to everyone: In the timeframe listed, it seems like it woud be better to have more public meetings once some plans become more solidified...more than are currently planned.
- 1:14 PM from Dave Watase to everyone: Unlike the mainland where a watershed is thousand of miles long and the destination far away. Ala Wai is short and conveyance is the solution. Better use of gravity flow tunnels or assisted by pumps throughout the whole duration of the storm will cut the hydrograph bell curve down.



Every major storm is a downgraded hurricane and the chance of a tide surge is real and if not accounted for will basically make whatever flood project totally ineffective.

- 1:15 PM from Mike Elhoff to everyone: 4. Enable a clean and safe canal by pumping 30CFS ocean water from Kapahulu pier to canal.
- 1:16 PM from Dave Watase to everyone: Underground and sight unseen and if you touch the stream do it in conjunction with your proposed Watershed wide natural and nature based measures (all of them).
- 1:16 PM from Winston Welch to everyone: Dave, Luciano, Mike have made some excellent points.
- 1:17 PM from Dave Watase to everyone: Yes, No 23 the 30cfs pump as mentioned by Mike.
- 1:17 PM from Sidney Lynch to everyone: Thx!
- 1:17 PM from Winston Welch to everyone: Please make sure that the tracking measures and info stays current and for future meetings please don't schedule on holidays
- 1:17 PM from Winston Welch to everyone: Thanks to you all
- 1:17 PM from Tyson Vaughan to everyone: Roger that Winston. Mahalo!

#### Attachment 4 – Workshop #4 Chat comments (Breakout Room #1)

- 12:25 PM from aaa to everyone in this session: What's the website address for all the measures that are being considered?
- 12:25 PM from Haku Milles to everyone in this session:  
[https://www.honolulu.gov/rep/site/ddc/ddc\\_docs/Management\\_Measure\\_Tracking\\_Spreadsheet\\_April2022\\_FinalPublicMeeting.pdf](https://www.honolulu.gov/rep/site/ddc/ddc_docs/Management_Measure_Tracking_Spreadsheet_April2022_FinalPublicMeeting.pdf)
- 12:36 PM from Matthew Gonser to everyone in this session: Exciting DLNR announcement from Dec. 2021 re: resources for forest management. City supported with letter of support - <https://dlnr.hawaii.gov/blog/2021/12/08/nr21-224/>
- 12:44 PM from Luciano Minerbi to everyone in this session: The real partnership among fed, state, county establish the broad MRM approach that is actuated by the specific and respective sectorial authorities of the fed-state-county agencies. This has to be documented right now with MOU and MOA Mahalo
- 12:46 PM from Winston Welch to everyone in this session: Was extensive use of the Ala Wai Golf Course addressed last week?
- 12:46 PM from Tyson Vaughan to everyone in this session: Yes
- 12:47 PM from Winston Welch to everyone in this session: Right...the entire walls need to be reinforced and/or rebuilt. I also did not understand why the canal is not being considered to be dredged to its original depth
- 12:48 PM from Winston Welch to everyone in this session: Canal walls that is
- 12:50 PM from Steve Holmes to everyone in this session: we cant hear you
- 12:51 PM from Steve Holmes to everyone in this session: better
- 12:52 PM from Luciano Minerbi to everyone in this session: Mike: can you also summarize in the chat we cannot hear you well mahalo
- 12:56 PM from Ken to everyone in this session: Unfortunately, due to conflicts in my schedule, I was not able to attend the previous sessions and just glad that I am able to listen in the final session. I think Dr. Minerbi's comments together with Winston's and Mike Elhoff's all address the key issues that I would bring to the table. In short, it is critical that the flood mitigation solution is within the framework of an holistic, integrative systems thinking approach which will not only address the flood issue but also address clean water, including the nearshore coral reef ecosystem.
- 12:56 PM from Kelley Philbin to everyone in this session: Winston: Dredging may cause structural issues and slope stability issues with the bridges and piers within the canal. The canal will have tidal influence, reducing capacity as well.
- 12:57 PM from Melvia Kawashima to everyone in this session: ; question re Palolo Stream soil erosion issue - private properties but did not see it in Management Tracking rpt

- **Attachment 5 – Workshop #4 Chat comments (Breakout Room #2)**

- 12:24 PM from Dave Watase to everyone in this session: No. 39-48 suggests how and where to divert water which might mean where to intercept the water upstream to divert to the Ala Wai Golf Course Detention Basin. I'd recommend capturing it at a minimum at the Palolo Confluence or at Kanewai Park.
- 12:29 PM from Lorraine Minatoishi to everyone in this session: will the funding come from all three agency levels? City, State and federal? who will administer the project?
- 12:32 PM from Cindy Acpal to everyone in this session: This phase of the study (General Reevaluation) is 100% federally funded. The next phase (Preconstruction Engineering and Design) of the project would be cost shared 65%/35% Federal to non-Federal.
- 12:32 PM from Alex Kozlov DDC to everyone in this session: Ms. Minatoishi - funding is 65%/35% Fed/non-Fed.
- 12:32 PM from Alex Kozlov DDC to everyone in this session: Thanks Cindy.
- 12:34 PM from Grant Tokumi to everyone in this session: I didn't see this questions in the comment matrix spreadsheet from last meeting so I'll ask again. Are you assuming that you would need to acquire easement/ right-of-way along the entire alignment of SWIFT tunnels, or can you tunnel under private property without property acquisition, Elon Musk style?
- 12:35 PM from Lorraine Minatoishi to everyone in this session: thank you. Has anyone looked at converting the golf course from an 18 hole to a 9 hole course and allow more pedestrian and bicycle access within the area amongst the new water channels from flood water being diverted from Ala Wai canal and Manoa Street and McCully Stream.
- 12:36 PM from Sidney Lynch to everyone in this session: The original plan had a pump at the mouth of the canal but it was dismissed as not large enough and also because it would inconvenience paddlers and disturb the fish. Is this pump now being reconsidered since the level of flood has been lowered?
- 12:36 PM from Sharon C. to everyone in this session: People have tried to get the Golf Course converted for private use. It is a popular course and should remain.
- 12:37 PM from Lorraine Minatoishi to everyone in this session: does the water flow up from the ocean or from the streams, or both?
- 12:39 PM from Cindy Acpal to everyone in this session: @Grant Tokumi: the response to your question was provided in the minutes from last week's meeting. [https://www.honolulu.gov/rep/site/ddc/ddc\\_docs/220414\\_Public\\_Workshop\\_-\\_AW\\_Canal\\_MFR.pdf](https://www.honolulu.gov/rep/site/ddc/ddc_docs/220414_Public_Workshop_-_AW_Canal_MFR.pdf)
- 12:41 PM from Lorraine Minatoishi to everyone in this session: Michelle, would you oppose a park plan similar to Central Park- with museums and additional bridges across the Ala Wai for public access? the golf course can be retained, but made smaller
- 12:41 PM from Sharon C. to everyone in this session: This is a hundred year flood. Can the flood simply shut down the golfing until it gets cleaned back up? It seems all or nothing. Moiliili has tunnels draining water from the mountain. Micro tunneling adds more.
- 12:41 PM from Grant Tokumi to everyone in this session: Thank you Cindy! I see it.
- 12:41 PM from Alex Kozlov DDC to everyone in this session: FAQ 18 is being revised to add where the public can provide input on the bridge.

- 12:43 PM from Alex Kozlov DDC to everyone in this session: FAQ 18 is being revised to where the public can comment on the bridge. This USACE effort must focus on a flood control solution regardless of the outcome of the bridge.
- 12:43 PM from Lorraine Minatoishi to everyone in this session: Is there a estimated funding amount?
- 12:43 PM from Dave Watase to everyone in this session: I question using the Ala Wai Park as a detention basin which is a remnant of the EDR plan. But if you are able to get flood water straight to the ocean by going under Waikiki and if needed detention storage use the Ala Wai Golf Course. Anything going above ground will cause a nightmare of other issues with the interior drainage with the required capping or will require pumping stations at every outlet. Any kind of walls will require flood gates like for the Hausten's ditch, UH Avenue 8x 10 culvert, Makiki Stream will have to be bypassed and gated or pumped, if the flood gate in the middle is eliminated then pumping stations as proposed in the 2015 DEIS would be needed. The most common sense solution is to find a way without high walls. Even the 2017 FEIS Engineering Peer review warns of several concerns going this direction including requiring micro pilings, coral subbase liquification, historic walls, location of trees. I compare it to building the RAIL down Dillingham Blvd.
- 12:44 PM from Daisy Murai to everyone in this session: NOTE: the City is already seeking Federal Funds of \$46.5 Million Dollars after OMPO POLICY BOARD has approved for this project (Policy Board has 5 Councilmembers & 5 Legislators).
- 12:47 PM from Grant Tokumi to everyone in this session: Are you intending to begin easements/ right-of-way acquisition based on conceptual design? I believe the answer is yes, but want to verify with you.
- 12:48 PM from Sidney Lynch to everyone in this session: Great question Grant
- 12:48 PM from Sidney Lynch to everyone in this session: Considering the original detention basins again?
- 12:51 PM from Sidney Lynch to everyone in this session: The original 7 upper detention basins on Pukele, Waiomao, Maikiki streams
- 12:52 PM from Dave Watase to everyone in this session: Under Ala Wai Canal measures: 20, 21, 22, 23, 190, 191 are all good ideas. The Ala Wai is flat and has limited flow velocity. If you have an incoming high tide, king tide, or tide surge when we have a big storm nothing will flow out until the canal elevation is higher than the ocean level. Water entering at the far end has to flow 2 miles to exit at the Ala Wai harbor on a flat path. Nothing will flow out from the back end until the front end drains out first (Makiki stream, then Manoa Stream etc). So, why did the 2015 DEIS have two giant pumping stations basically to pump water into a full above ground reservoir. All the while, the ocean is only 1/4 mile away if you pump it straight down Kapahulu Ave. Pumping is not tidal influenced and whatever cfs the pump is rated at is what we get rid of. The other thing is a pump can be run during the whole duration of the storm and not just at peak flow and critical times if implemented properly.
- 12:53 PM from Lorraine Minatoishi to everyone in this session: The pond (swale) for flooding was very pretty. it wasn't pumped out. no misquitos either
- 12:55 PM from Allen Chin to everyone in this session: My input is that Sea Level Rise (SLR) will be a greater factor than people are considering it to be. SLR will be rising exponentially in future years SLR will be a great impact especially if we have a large flood during a cumulative effects of high tide, antecedent ground conditions, storm surges,, etc. Also SLR will cause higher groundwater that impacts existing conditions. Pumps need to be maintained and functioning (that didn't happen in New Orleans during their big event.) . Tunnels can be expensive and backwater flows may

prevent them functioning properly. I'm not a fan of floodwalls or upstream detention basins. (I am a Water Resources Engineer who lived on the Ala Wai Canal for 12 years).

- 12:56 PM from Dave Watase to everyone in this session: The 2015 DEIS had two pumping stations at the end of the canal with ZERO detention storage behind it. Which means that the pumps had to be designed and rated for the peak flow even if the peak flow was only for 20 minutes. Using the existing canal as a detention basin or the Ala Wai Golf Course would have made more sense. That was a flaw in the 2015 DEIS. The 2015 DEIS also had the Hausten's Detention basin which was above ground to be filled by gravity? Again didn't make sense. The USACE forgot to gate off Makiki Stream for the 2015 DEIS and with the above ground walls on both sides of the Makiki stream was like what would stop the water from backflowing up Makiki Stream. So, the EDR actually resolved it by creating the Makiki Bypass but that was flawed too because half of it was underwater below sea level and was subjected to tide surges, high tides, and king tides.
- 12:56 PM from Lorraine Minatoishi to everyone in this session: will this study also try to look for ideas of cleaning the waters of the streams and Ala Wai- to better improve our eco-system?
- 12:58 PM from Laura Ruby to everyone in this session: what is FAQ 18 and a web link please
- 12:58 PM from Cindy Acpal to everyone in this session:  
<https://www.honolulu.gov/alawai/faq.html>
- 12:58 PM from Sidney Lynch to everyone in this session: so speedy in your answers. Appreciate it.